Claims

What is claimed is:

1. A device for winding an elongated flexible material, the winding device comprising:

a barrel defining a primary winding area;

a flange wall connected to the barrel;

an auxiliary winding area separated from the primary winding area by the flange wall; and

a guide pathway including opposite first and second ends respectively communicating with the primary and auxiliary winding areas for directing an elongated flexible material therebetween,

the guide pathway including opposite end segments interconnected by a transition segment, at least a portion of each of the end segments of the guide pathway curving in a substantially circumferential direction with respect to an axis of rotation of the winding device, the guide pathway reversing in direction of curvature in the transition segment to provide for simultaneous winding of an elongated flexible material in the primary and auxiliary winding areas.

2. The winding device according to claim 1, wherein at least a portion of the guide pathway is located within an interior defined by the barrel.

3. The winding device according to claim 2 further including an insert received within the interior of the barrel through an open end of the barrel, at least a portion of the guide pathway being defined between the insert and the barrel.

4. The winding device according to claim 3, wherein a channel is formed in an outer surface of the insert to define the portion of the guide pathway between the outer surface of the insert and an inner surface of the barrel.

5. The winding device according to claim 3, wherein a portion of the insert extends from the open end of the barrel to define the auxiliary winding area.

6. The winding device according to claim 1, wherein the barrel includes first and second barrel parts respectively carried by first and second members securable to each other, each of the barrel parts defining a portion of the primary winding area.

7. The winding device according to claim 6, wherein each of the barrel-carrying members includes cylindrical wall defining the associated barrel part, each barrel-carrying member further including an end wall adjacent an end of the cylindrical wall, the end wall of each barrel-carrying member including at least one opening, the at least one end wall opening of each barrel-carrying member alignable with the at least one end wall opening of the other barrel-carrying member for receipt of a fastener.

8. The winding device according to claim 7 further including first and second inserts each received within an interior defined by the respective first and second barrel-carrying member, the insert received through an open end of the cylindrical wall opposite the end wall.

9. The winding device according to claim 8, wherein each of the inserts includes a channel formed in an outer surface of the insert to define the guide pathway between the outer surfaces of the inserts and inner surfaces defined by the cylindrical walls of the barrel-carrying members.

10. The winding device according to claim 1, wherein the barrel includes opposite ends and wherein the winding device includes two flange walls and two auxiliary winding areas, one of the flange walls and one of the auxiliary winding areas located adjacent one of the opposite ends of the barrel, and wherein the winding device further includes two guide pathways each having a first end communicating with the primary winding area and an opposite second end communicating with one of the auxiliary winding areas.

11. A device for winding an elongated flexible material, the winding device comprising:

a substantially cylindrical barrel defining a primary winding area;

a flange including a flange body having a substantially planar wall portion connected to the barrel and a substantially cylindrical wall portion connected to the substantially planar wall portion to define a flange interior therewith;

an auxiliary winding area, the planar wall portion of the flange body located between the primary and auxiliary winding areas; and

a guide pathway located within the flange interior having opposite first and second ends respectively communicating with the primary and auxiliary winding areas, the guide pathway including opposite end segments and a transition segment between the first and second end segments,

at least a portion of the end segments of the guide pathway curving in a substantially circumferential direction with respect to an axis of rotation for the winding device, the guide pathway reversing in direction of curvature in the transition segment to provide for simultaneous winding of an elongated flexible material in the primary and auxiliary winding areas.

12. The winding device according to claim 11, wherein the flange further includes a cover received by the planar wall portion and cylindrical wall portion of the flange body to enclose the flange interior.

13. The winding device according to claim 12, wherein the flange cover includes a cylindrical wall portion slidingly received by the cylindrical wall portion of the flange body and a substantially planar wall portion connected to the cylindrical wall portion of the flange cover at an outer periphery thereof, and wherein the auxiliary winding area is defined by a substantially cylindrical member connected to the planar wall portion of the cover opposite the cylindrical wall portion of the cover.

14. The winding device according to claim 13, wherein the planar wall portion of each of the flange body and the flange cover includes an access opening, the access

openings of the flange body and the flange cover respectively located adjacent the first and second ends of the guide pathway.

15. The winding device according to claim 13, wherein the guide pathway is defined by guide structure located within the flange interior, the guide structure including first and second parts respectively carried by the flange body and the flange cover, each of the parts of the guide structure defining a ramping surface with respect to the planar wall portion of the associated flange body and flange cover, the first and second parts of the guide structure correspondingly formed to define the guide pathway therebetween.

16. The winding device according to claim 15, wherein each of the first and second parts of the guide structure defines a channel extending along the guide structure.

17. The winding device according to claim 13 further including a barrel post located within an interior defined by the barrel and connected to the planar wall portion of the flange body and a flange post connected to the planar wall portion of the flange cover and received by the barrel post through an opening in the planar wall portion of the flange body.

18. A winding spool comprising:

first and second barrel parts each including a cylindrical wall having an inner surface defining an interior and an outer surface defining a portion of a primary winding area for the winding spool, the cylindrical wall including opposite first and second ends, each of the barrel parts including an end wall connected to the cylindrical wall adjacent its second end, the end walls of the barrel parts including aligned openings for receiving fasteners to secure the barrel parts to each other;

first and second inserts each having a cylindrical outer surface, the inserts respectively received within the interior of the first and second barrel parts through the first ends of the cylindrical wall such that a portion of the insert extends beyond the first end of the cylindrical wall, the extending portion of each of the inserts defining an auxiliary winding area;

first and second flange walls respectively connected the cylindrical wall of the first and second barrel parts, each flange wall located between the portion of the primary winding area defined by the associated barrel part and the auxiliary winding area defined by the associated insert; and

first and second guide pathways for respectively directing an elongated flexible material between the primary winding area and the first and second auxiliary winding areas, each guide pathway including opposite ends respectively communicating with the primary winding area and the associated auxiliary winding area, each guide pathway defined by a pair of channels each formed in the outer surface of one of the first and second inserts, each channel including first and second portions, the second portion of each channel extending to an end of the associated insert, the first portion of each channel curving in a substantially circumferential direction with respect to an axis of rotation for the spool, the second portion of each channel oriented substantially axially with respect to the axis of rotation adjacent the end of the insert, each of the channel pairs arranged such that curvature of the resulting guide pathway is reversed in circumferential direction in the second portions of channel pair to provide simultaneous winding of an elongated flexible material in the primary winding area and the associated auxiliary winding area.